

ENZ-004



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SEQUENCE LISTING

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<120> Engineered Stimulus-Responsive Switches

<130> ENZ-004

<140> US 10/032,827
<141> 2001-10-23

<150> US 60/242,546
<151> 2000-10-23

<160> 20

<170> PatentIn version 3.0

<210> 1
<211> 21
<212> PRT
<213> Artificial

<220>
<223> Zinc finger consensus sequence

<220>
<221> misc_feature
<222> (2)..(3)
<223> wherein Xaa at positions 2, 3 can be any amino acid

<220>
<221> misc_feature
<222> (5)..(7)
<223> wherein Xaa at positions 5, 6, 7 can be any amino acid

<220>
<221> misc_feature
<222> (9)..(13)
<223> wherein Xaa at positions 9, 10, 11, 12, 13 can be any amino acid

<220>
<221> misc_feature
<222> (15)..(16)
<223> wherein Xaa at positions 15, 16 can be any amino acid

<220>
<221> misc_feature
<222> (18)..(20)
<223> wherein Xaa at positions 18, 19, 20 can be any amino acid

<400> 1

Cys Xaa Xaa Cys Xaa Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa
1 5 10 15

His Xaa Xaa Xaa His
20

<210> 2
<211> 22
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<220>
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<220>
<221> misc_feature
<222> (2)..(4)
<223> wherein Xaa at positions 2, 3, 4 can be any amino acid

<220>
<221> misc_feature
<222> (6)..(8)
<223> wherein Xaa at positions 6, 7, 8 can be any amino acid

<220>
<221> misc_feature
<222> (10)..(14)
<223> wherein Xaa at positions 10, 11, 12, 13, 14 can be any amino acid

<220>
<221> misc_feature
<222> (16)..(17)
<223> wherein Xaa at positions 16, 17 can be any amino acid

<220>
<221> misc_feature
<222> (19)..(21)
<223> wherein Xaa at positions 19, 20, 21 can be any amino acid

<400> 2

Cys Xaa Xaa Xaa Cys Xaa Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa Leu Xaa
1 5 10 15

Xaa His Xaa Xaa Xaa His
20

<210> 3
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<213> Artificial

<220>
<223> Zinc finger consensus sequence

<220>
<221> misc_feature
<222> (2)..(5)
<223> wherein Xaa at positions 2, 3, 4, 5 can be any amino acid

<220>
 <221> misc_feature
 <222> (7)..(9)
 <223> wherein Xaa at positions 7, 8, 9 can be any amino acid

<220>
 <221> misc_feature
 <222> (11)..(15)
 <223> wherein Xaa at positions 11, 12, 13, 14, 15 can be any amino acid

<220>
 <221> misc_feature
 <222> (17)..(18)
 <223> wherein Xaa at positions 17, 18 can be any amino acid

<220>
 <221> misc_feature
 <222> (20)..(22)
 <223> wherein Xaa at positions 20, 21, 22 can be any amino acid

<400> 3

Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa Leu
 1 5 10 15

Xaa Xaa His Xaa Xaa Xaa His
 20

<210> 4
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 <213> Artificial

<220>
 <223> Zinc finger consensus sequence

<220>
 <221> misc_feature
 <222> (2)..(3)
 <223> wherein Xaa at positions 2, 3 can be any amino acid

<220>
 <221> misc_feature
 <222> (4)..(16)
 <223> wherein Xaa at positions 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 can be any amino aci

<220>
 <221> misc_feature
 <223> wherein Xaa at positions 19, 20 can be any amino acid

<400> 4

Cys Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 1 5 10 15

Xaa Cys Xaa Xaa Cys
20

<210> 5
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<213> Artificial

<220>
<223> target sequence for protein kinase A

<400> 5

Leu Arg Arg Ala Ser Leu Gly
1 5

<210> 6
<211> 10
<212> PRT
<213> Artificial

<220>
<223> substrate for casein kinase II

<400> 6

Arg Arg Arg Glu Glu Glu Thr Glu Glu Glu
1 5 10

<210> 7
<211> 12
<212> PRT
<213> Artificial

<220>
<223> substrate sequence for v-Abl tyrosine kinase

<400> 7

Glu Ala Ile Tyr Ala Ala Pro Phe Ala Lys Lys Lys
1 5 10

<210> 8
<211> 27
<212> DNA
<213> Artificial

<220>
<223> primer for leucine zipper motif

<400> 8
atcgcgaca tgaacaact tgaagac

27

<210> 9
<211> 22
<212> DNA
<213> Artificial

<220>
<223> primer for leucine zipper motif

<400> 9

tcagcgttcg ccaactaatt tc

22

<210> 10
<211> 26
<212> DNA
<213> Artificial

<220>
<223> primer for lambda repressor

<400> 10
atgagcacia aaaagaaacc attaac

26

<210> 11
<211> 18
<212> DNA
<213> Artificial

<220>
<223> primer for lambda repressor

<400> 11
gcttaccag cgctccgc

18

<210> 12
<211> 504
<212> DNA
<213> Artificial

<220>
<223> cI-bZIP repressor variant

<400> 12
atgagcacia aaaagaaacc attaacacia gagcagcttg aggacgcacg tcgccttaaa 60
gcaatttatg aaaaaaagaa aaatgaactt ggcttatccc aggaatctgt cgcagacaag 120
atgggggatgg ggcagtcagg cgcttggtgct ttatttaatg gcatcaatgc attaaatgct 180
tataacgccg cattgcttac aaaaattctc aaagtttagcg ttgaagaatt tagcccttca 240
atcgccagag aaatctacga gatgtatgaa gcggttagta tgcagccgctc acttagaagt 300
gagtatgagt accctgtttt ttctcatggt caggcaggga tgttctcacc taagcttaga 360
acctttacca aaggtgatgc ggagcgctgg gtaagcatcg cgcacatgaa acaacttgaa 420
gacaagggttg aagaattgct ttcgaaaaat tatcacttgg aaaatgaggt tgccagatta 480
aagaaattag ttggcgaacg ctga 504

<210> 13
<211> 35
<212> DNA
<213> Artificial

<220>
<223> primer for coding sequence of a temperature sensitive form of the
lambda repressor containing an AvaI sit

<400> 13
ttacaacgcc cgggtcagcc aaacgtctct tcagg 35

<210> 14
<211> 71
<212> DNA
<213> Artificial

<220>
<223> primer for the coding sequence of a temperature sensitive form of
lambda represso

<400> 14
atgggcattt tctcgagtca gccggggccat accccgcatac cggcggccag cacaaaaaag 60
aaaccattaa c 71

<210> 15
<211> 784
<212> DNA
<213> Artificial

<220>
<223> TBD-cI chimeric repressor variant

<400> 15
atgggcattt tctcgagtca gccggggccat accccgcatac cattaacaca agagcagcac 60
aaaaaagaaa ccattaacac aagagcagct tgaggacgca cgtcgcctta aagcaattta 120
tgaaaaaaag aaaaatgaac ttggcttatac ccaggaatct gtcgcagaca agatggggat 180
ggggcagtcac ggcgttggtg ctttattttaa tggcatcaat gcattaaatg cttataacgc 240
cgcattgctt acaaaaattc tcaaagttag cgttgaagaa tttagccctt caatcgccag 300
agaaatctac gagatgtatg aagcggttag tatgcagccg tcacttagaa gtgagtatga 360
gtaccctggt catcaccatac accatcactt ttctcatggt caggcagga tgttctcacc 420
taagcttaga acctttacca aaggtgatgc ggagagatgg gtaagcaca ccaaaaaagc 480
cagtgattct gcattctggc ttgaggttga aggtaattcc atgaccgcac caacaggctc 540
caagccaagc tttcctgacg gaatgttaat tctcgttgac cctgagcagg ctgttgagcc 600
aggtgatttc tgcataacca gacttggggg tgatgagttt accttcaaga aactgatcag 660
ggatagcggc cagggtgtttt tacaaccact aaaccacag tacccaatga tcccatgcaa 720
tgagagttgt tccgttggtg ggaaagttat cgctagtcag tggcctgaag agacgtttgg 780
ctga 784

<210> 16
<211> 61
<212> DNA
<213> Artificial

<220>

<223> primer for coding sequence of a temperature sensitive form of lam
bda repressor

<400> 16

atgggcattt tctcgagtca gccggggccat accccgcata cattaacaca agagcagctt 60

g

61

<210> 17

<211> 542

<212> DNA

<213> Artificial

<220>

<223> TBD-cI-bZIP chimeric repressor variant

<400> 17

atgggcattt tctcgagtca gccggggccat accccgcata cattaacaca agagcagcac 60

aaaaaagaaa ccattaacag gacgcacgtc gccttaaagc aatttatgaa aaaaagaaaa 120

atgaacttgg cttatcccag gaatctgtcg cagacaagat ggggatgggg cagtcaggcg 180

ttggtgcttt atttaatggc atcaatgcat taaatgctta taacgccgca ttgcttacia 240

aaattctcaa agttagcgtt gaagaattta gcccttcaat cgccagagaa atctacgaga 300

tgtatgaagc ggtagtatg cagccgtcac ttagaagtga gtatgagtac cctgtttttt 360

ctcatgttca ggcagggatg ttctcaccta agcttagaac ctttaccaa ggtgatgcgg 420

agcgctgggt aagcatcgcg cacatgaaac aacttgaaga caagggtgaa gaattgcttt 480

cgaaaaatta tcacttgga aatgaggttg ccagattaaa gaaattagtt ggcgaacgct 540

ga

542

<210> 18

<211> 525

<212> DNA

<213> Artificial

<220>

<223> TBP-cI-bZIP repressor variant

<400> 18

atgggcattt tctcgagtca gccggggccat accccgcata cattaacaca agagcagctt 60

gaggacgcac gtcgccttaa agcaatttat gaaaaaaga aaaatgaact tggcttatcc 120

caggaatctg tcgcagacaa gatggggatg gggcagtcag gcgttggtgc tttatttaat 180

ggcatcaatg cattaaatgc ttataacgcc gcattgctta caaaaattct caaagttagc 240

gttgaagaat ttagcccttc aatcgccaga gaaatctacg agatgtatga agcggttagt 300

atgcagccgt cacttagaag tgagtatgag taccctgttt tttctcatgt tcaggcaggg 360

atgttctcac ctaagcttag aacctttacc aaagggtgatg cggagcgctg ggtaagcacc 420

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8

gcgcacatga aacaacttga agacaagggtt gaagaattgc ttctgaaaaa ttatcacttg 480
gaaaatgagg ttgccagatt aaagaaatta gttggcgaac gctga 525

<210> 19
<211> 52
<212> DNA
<213> Artificial

<220>
<223> primer containing sequence for a weak tetracycline resistance pro
mote

<400> 19
gtttgacagc ttatcatcga atagctttaa tgcgctagct agacaagtac tc 52

<210> 20
<211> 52
<212> DNA
<213> Artificial

<220>
<223> primer containing sequence for a weak constitutive tetracycline p
romote

<400> 20
gagtacttgt ctagctagcg cattaaagct attcgatgat aagctgtcaa ac 52